

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

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32. (Currently Amended) A subscriber terminal on a subscriber terminal side of a communication system including on a network side a packet data communication system having a base station system, for performing a user packet data transfer between said subscriber terminal side and said base station system on said network side, comprising:

a1) ~~means adapted to provide~~ a radio communication link between said base station system on said network side and said subscriber terminal side;

a2) ~~means adapted to provide~~ radio resources, ~~to be used for~~ facilitating said user data packet transfer, on said radio communication link;

a3) ~~a physical connection controller adapted to provide a physical connection, for~~ performing said user data packet transfer, on said radio communication link between said base station system and said subscriber terminal side by scheduling said user data packets as a number of radio blocks on said radio resources on said radio communication link,

said physical connection indicating in the subscriber terminal side and the network side that the subscriber terminal side and the network side are included in ~~the~~ a radio resources scheduling process ~~a3)~~ for performing said user data packet transfer;

a transmission buffer comprising a subscriber terminal side transmission queue wherein said user data packets enter said transmission queue with respective inter-arrival times;

b1) ~~a transmission detector including an active period detector adapted to for~~ monitoring, for a ~~the~~ user data packet transfer between said network side and said subscriber terminal side, the inter-arrival time of user data packets to be transferred as said radio blocks scheduled on said radio resources on said radio communication link by said physical connection controller into said transmission queue by respectively detecting the user data packets arriving into the transmission queue and determining as inter-arrival time respectively the time between two detected user data packets and to for

b2) ~~determined~~ determining as an active period the period from a first detected user data packet to a last detected user data packet for which each detetermined ~~monitored~~ inter-arrival time falls in a predetermined range; and

e) ~~wherein~~ wherein said physical connection controller further ~~including~~ includes a physical connection maintaining device adapted to maintain said physical connection between said subscriber terminal side and said network side in said active period.

33. (Currently Amended) A subscriber terminal according to claim 32, wherein:

| said active period detector is ~~further adapted for detecting~~ detects silence periods in which no data packets for data packet transfer are available on said subscriber terminal side; and

 said physical connection controller includes a physical connection terminator for terminating said physical connection during said silence periods detected by said active period detector.

34. (Previously Presented) A subscriber terminal according to claim 32, wherein said active period detector comprises a real-time application data detector for detecting whether said data packets are real-time data packets.

35. (Previously Presented) A subscriber terminal according to claim 32, wherein said physical connection maintaining device for maintaining said physical connection between said subscriber terminal side and said network side in said active period comprises a data packet transmission delay device for delaying the transmission of a data packet at least for the inter-arrival time as monitored by said active period detector.

36. (Currently Amended) A subscriber terminal according to claim 32, wherein:

| ~~a~~ said subscriber terminal side transmitter queue from which data packets are successively transmitted to the network side;

 a subscriber terminal side transmitter queue monitoring device for determining whether the transmitter queue comprises data packets to be transmitted;

 a subscriber terminal side transmitter queue information setting means for determining, on the basis of the determination made by said transmitter queue monitoring means, a transmitter queue information indicating whether the transmitter queue is empty (CV=0) or whether the transmitter queue contains at least one data packet to be transmitted to the network side (CV>0); and

 a subscriber terminal side transmitter for transmitting to said network side data packets from the transmitter queue and for transmitting in association with a respective data packet said transmitter queue information.

37. (Previously Presented) A subscriber terminal according to claim 36, wherein:

said physical connection maintaining device comprises a subscriber terminal side timer for counting the inter-arrival time when a respective data packet is transmitted;

if said subscriber terminal side transmitter queue monitoring device does not determine an entry of a new data packet in the transmitter queue in said counted inter-arrival time, said subscriber terminal side transmitter transmits a special data packet to the network side and in association therewith a transmitter queue information indicating that the transmitter queue is empty.

38. (Previously Presented) A subscriber terminal according to claim 37, wherein said special data packet is the last transmitted data packet or a dummy data packet.

39. (Previously Presented) A subscriber terminal according to claim 36, further comprising an uplink release acknowledgement message detector for determining the receipt of an uplink release acknowledgement message transmitted from the network side in response to receiving a transmitter queue information (CV=0) indicating that the transmitter queue is empty; and wherein if said subscriber terminal transmitter queue monitoring means detects a new entry of data packet in said transmitter queue after said subscriber terminal transmitter has transmitted a transmitter queue information (CV=0) indicating that the transmitter queue is empty, an uplink release acknowledgement message detected by said uplink release acknowledgement message detector is not answered by transmitting an uplink release confirmation message but by transmitting said new data packet by said subscriber terminal transmitter for maintaining said physical connection.

40. (Previously Presented) A subscriber terminal according to one or more claim 39, wherein said transmitter queue information is transmitted in a respective data packet.

41. (Currently Amended) A communication system for performing packet data transfer on a connection between the subscriber terminal side and a network side, wherein during a data packet transfer a physical connection is maintained which indicates in the subscriber terminal and the network side that the subscriber terminal and the network side are capable of performing said packet data transfer, comprising at least one subscriber terminal ~~according to claim 32~~ comprising:

a radio communication link between said base station system on said network side and said subscriber terminal side;

radio resources for facilitating said user data packet transfer on said radio communication link;

a physical connection controller for performing said user data packet transfer on said radio communication link between said base station system and said subscriber terminal side by scheduling said user data packets as a number of radio blocks on said radio resources on said radio communication link,

said physical connection indicating in the subscriber terminal side and the network side that the subscriber terminal side and the network side are included in a radio resources scheduling process for performing said user data packet transfer;

a transmission buffer comprising a subscriber terminal side transmission queue wherein said user data packets enter said transmission queue with respective inter-arrival times;

a transmission detector including an active period detector for monitoring, for the user data packet transfer between said network side and said subscriber terminal side, the inter-arrival time of user data packets into said transmission queue by respectively detecting the user data packets arriving into the transmission queue and determining as inter-arrival time respectively the time between two detected user data packets and for

determining as an active period the period from a first detected user data packet to a last detected user data packet for which each determined inter-arrival time falls in a predetermined range; and

wherein said physical connection controller further includes a physical connection maintaining device adapted to maintain said physical connection between said subscriber terminal side and said network side in said active period.

42. (Currently Amended) A network controller on a network-side of a communication system including on said network side a packet data communication system having a base station system, for performing a user packet data transfer between said base station system on said network side and a subscriber terminal side, comprising:

a1) ~~means adapted to provide a radio communication link between said base station system on said network side and said subscriber terminal side;~~

a2) ~~means adapted to provide radio resources ,to be used for~~ facilitating said user data packet transfer, on said radio communication link;

a3) ~~a physical connection controller adapted to provide a physical connection, for performing said user data packet transfer, on said radio communication link between said base station system and said subscriber terminal side by scheduling said user data packets as a number of radio blocks on said radio resources on said radio communication link,~~

~~said physical connection indicating in the subscriber terminal side and the network side that the subscriber terminal side and the network side are included in the~~ a radio resources scheduling process a3) for performing said user data packet transfer;

a4) a transmission buffer comprising a network side transmission queue wherein said user data packets enter said transmission queue with respective inter-arrival times,

~~b1) a transmission detector including an active period detector adapted to for monitoring, for a the user data packet transfer between said network side and said subscriber terminal side, the inter-arrival time of user data packets to be transferred as said radio blocks scheduled on said radio resources on said radio communication link by said physical connection controller into said transmission queue by respectively detecting the user data packets arriving into the transmission queue and determining as interarrival time respectively the time between two detected user data packets and to~~

~~— b2) determinefor determining as an active period the period from a first detected user data packet to a last detected user data packet for which each determined monitored inter-arrival time falls in a predetermined range; and~~

e) ~~wherein said physical connection controller further including comprises a physical connection maintaining device adapted to maintain said physical connection between said subscriber terminal side and said network side in said active period.~~

43. (Currently Amended) A network controller according to claim 42, wherein:

| said active period detector is ~~further adapted for detecting~~detects silence periods in which no data packets for data packet transfer are available on said network side; and
 said physical connection controller includes a physical connection terminator for terminating said physical connection during said silence periods detected by said active period detector.

44. (Previously Presented) A network controller according to claim 42, wherein said active period detector comprises a real-time application data detector for detecting whether said data packets to be transmitted from said network side are real-time data packets.

45 (Previously Presented) A network controller according to one or more of claims 52, wherein said physical connection maintaining device for maintaining said physical connection between said subscriber terminal side and said network side in said active period comprises a data packet transmission delay device for delaying the transmission of a data packet at least for the inter-arrival time as monitored by said active period detector.

46. (Currently Amended) A network controller according to claim 42, further comprising:

| a said network side transmitter queue from which data packets are successively transmitted to the subscriber terminal side;

 a network side transmitter queue monitoring device for determining whether the transmitter queue comprises data packets to be transmitted;

 a network side transmitter queue information setting means for determining, on the basis of the determination made by said transmitter queue monitoring means, a transmitter queue information indicating whether the transmitter queue is empty or whether the transmitter queue contains at least one data packet to be transmitted to the subscriber terminal side; and

 a network side transmitter for transmitting to said subscriber terminal side data packets from the transmitter queue and for transmitting in association with a respective data packet said transmitter queue information.

47. (Previously Presented) A network controller according to claim 46, wherein:

said physical connection maintaining device comprises a network side timer for counting the inter-arrival time when a respective data packet is transmitted;

if said network side transmitter queue monitoring device does not determine an entry of a new data packet in the transmitter queue in said counted inter-arrival time, said network side transmitter transmits a special data packet to the subscriber terminal side and in association therewith a transmitter queue information indicating that the transmitter queue is empty.

48. (Previously Presented) A network controller according to claim 47, wherein said special data packet is the last transmitted data packet or a dummy data packet.

49. (Previously Presented) A network controller according to claim 46, wherein:

said physical connection maintaining device comprises a network side timer for counting the inter-arrival time when a respective data packet is transmitted;

if said network side transmitter queue monitoring device does not determine an entry of a new data packet in the transmitter queue in said counted inter-arrival time, said network side transmitter transmits a packet switched signalling message to the subscriber terminal side and in association therewith a transmitter queue information indicating that the transmitter queue is empty.

50. (Previously Presented) A network controller according to claim 46, wherein said transmitter queue information is transmitted in a respective data packet.

51. (Currently Amended) A communication system for performing packet data transfer on a connection between the subscriber terminal side and a network side, wherein during a data packet transfer a physical connection is maintained which indicates in the subscriber terminal and the network side that the subscriber terminal and the network side are capable of performing said packet data transfer, comprising at least one network controller ~~according to claim 42~~ comprising:

a radio communication link between said base station system on said network side and said subscriber terminal side;

radio resources for facilitating said user data packet transfer on said radio communication link;

a physical connection controller for performing said user data packet transfer, on said radio communication link between said base station system and said subscriber terminal side by scheduling said user data packets as a number of radio blocks on said radio resources on said radio communication link,

said physical connection indicating in the subscriber terminal side and the network side that the subscriber terminal side and the network side are included in a radio resources scheduling process for performing said user data packet transfer;

a transmission buffer comprising a network side transmission queue wherein said user data packets enter said transmission queue with respective inter-arrival times,

a transmission detector including an active period detector for monitoring, for the user data packet transfer between said network side and said subscriber terminal side, the inter-arrival time of user data packets into said transmission queue by respectively detecting the user data packets arriving into the transmission queue and determining as interarrival time respectively the time between two detected user data packets and for determining as an active period the period from a first detected user data packet to a last detected user data packet for which each determined inter-arrival time falls in a predetermined range; and

wherein said physical connection controller further comprises a physical connection maintaining device adapted to maintain said physical connection between said subscriber terminal side and said network side in said active period.

52. (Cancelled)

53. (Currently Amended) A method for transferring, ~~in a communication system including on a network side a packet data communication system having a base station system,~~ user data packets between ~~said a network side and a subscriber terminal side of a communication system having a base station system,~~ the method comprising the following steps:

a1) —providing a radio communication link between said base station system on said network side and said subscriber terminal side;

a2) —providing radio resources [[,]] to be used for said user data packet transfer, on said radio communication link;

a3) providing a physical connection [[,]] for performing said user data packet transfer~~[[,]]~~ on said radio communication link between said base station system and said subscriber terminal side by scheduling said user data packets as a number of radio blocks on said radio resources on said radio communication link,

said physical connection indicating in the subscriber terminal side and the network side that the subscriber terminal side and the network side are included in ~~the a~~ radio resources scheduling process a3) for performing said user data packet transfer;

providing a transmission buffer containing a subscriber terminal side transmission queue wherein said user data packets enter said transmission queue with respective inter-arrival times;

b1) —monitoring, for a user data packet transfer between said network side and said subscriber terminal side, the inter-arrival time of user data packets into said transmission queue by respectively detecting the user data packets arriving into the transmission queue and determining as inter-arrival time respectively the time between two detected user data packets to be transferred as said radio blocks scheduled on said radio resources on said radio communication link; and

b2) —~~determined~~determining as an active period the period from a first detected user data packet to a last detected user data packet for which each determined ~~monitored~~ inter-arrival time falls in a predetermined range; and

e) —maintaining said physical connection between said subscriber terminal side and said network side in said active period.

54. (Previously Presented) A method according to claim 53, further comprising:
detecting silence periods in which no data packets for data packet transfer are available on said subscriber terminal side; and
terminating said physical connection during said silence periods.
55. (Previously Presented) A method according to claim 53, further comprising detecting whether said data packets are real-time data packets.
56. (Previously Presented) A method according to claim 53, further comprising delaying the transmission of a data packet at least for the inter-arrival time as monitored by said active period detector.
57. (Currently Amended) A method according to claim 53, further comprising:
transmitting data packets from a transmitter queue ~~data packets~~;
determining whether the transmitter queue comprises data packets to be transmitted;
determining a transmitter queue information indicating whether the transmitter queue is empty ($CV=0$) or whether the transmitter queue contains at least one data packet to be transmitted to the network side ($CV>0$); and
transmitting data packets from the transmitter queue and in association with a respective data packet said transmitter queue information.
58. (Previously Presented) A method according to claim 57, further comprising:
counting the inter-arrival time when a respective data packet is transmitted; and
wherein if an entry of a new data packet into the transmitter queue is not determined in said counted inter-arrival time, transmitting a special data packet from the network side and in association therewith a transmitter queue information indicating that the transmitter queue is empty.
59. (Previously Presented) A method according to claim 58, further comprising transmitting as said special data packet the last transmitted data packet or a dummy data packet.

60. (Previously Presented) A method according to claim 57, further comprising:
receiving on the network side a transmitter queue information (CV=0) indicating that the transmitter queue is empty;
transmitting an uplink release acknowledgement message from the network side to the subscriber terminal side;
determining in the subscriber terminal side the receipt of said uplink release acknowledgement message;
if a new entry of data packet in said transmitter queue is detected after said subscriber terminal transmitter has transmitted a transmitter queue information (CV=0) indicating that the transmitter queue is empty, said subscriber terminal does not answer the uplink release acknowledgement message by transmitting an uplink release confirmation message but by transmitting said new data packet for maintaining said physical connection.

61. (Previously Presented) A method according to one or more claims 53, wherein said transmitter queue information is transmitted in a respective data packet.

62. (Previously Presented) A method according to claim 57, further comprising counting the inter-arrival time when a respective data packet is transmitted; and wherein if an entry of a new data packet into the transmitter queue is not determined in said counted inter-arrival time, transmitting a signalling message from the network side and in association therewith a transmitter queue information indicating that the transmitter queue is empty.